

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-32 (cancelled)

33. (new) A powdered material, the binder phase of which essentially consists of a cement system, which powdered material has the capacity, following saturation with a hydration liquid, to hydrate to a chemically bonded ceramic material, **characterised in** that said powdered material comprises a first part component which has the ability, together with a second part component not comprised in said powdered material, to form an organic phase in the form of a polymer selected from the group that consists of polymers based on hydrophilic or partially hydrophilic acrylate, carbonate, protein, cellulose, siloxane, polyacetal, collagen, elastin, polyester.

34. (new) A powdered material according to claim 33, **characterised in** that the binder phase is a ceramic powder selected from the group that consists of aluminates, silicates, phosphates, sulphates and combinations thereof.

35. (new) A powdered material according to claim 34, **characterised in** that the binder phase is has cations selected from the group consisting of Ca, Sr and Ba.

36. (new) A powdered material according to claim 35, **characterised in** that said first part component is a monomer selected from the group that consists of monomers of

hydrophilic methacrylate type, HEMA, monomers having phosphate groups, alkenoids, monomers for carbopolymers, diols, diacids.

37. (new) A powdered material according to claim 33, **characterised in** that it exists in the form of granules of powder particles, which granules exhibit a degree of compaction above 55 % and a mean size of 30 - 250  $\mu\text{m}$ .

38. (new) A powdered material according to claim 37, **characterised in** that said granules exist in a composition that comprises up to 50 % non pre-compacted powdered material, of the same cement-based system as the powdered material in the granules.

39. (new) An aqueous hydration liquid for hydration of a powdered ceramic material according to claim 33 to a chemically bonded ceramic material, **characterised in** that said hydration liquid comprises a second part component which has the ability, together with a first part component comprised in said powdered material, to form an organic phase in the form of a polymer.

40. (new) A hydration liquid according to claim 39, **characterised in** that said second part component is a polymer selected from the group that consists of polymers based on hydrophilic or partially hydrophilic acrylate, carbonate, protein, cellulose, siloxane, polyacetal, collagen, elastin, polyester.

41. (new) A hydration liquid according to claim 39, **characterised in** that said second part component is a monomer selected from the group consisting of monomers of hydrophilic methacrylate type, HEMA, monomers having phosphate

groups, alkenoids, monomers for carbopolymers, diols, diacids, amino acids.

42. (new) A hydration liquid according to claim 40, **characterised in** that said second part component is a monomer selected from the group that consists of diacids or aminoacids.

43. (new) A chemically bonded ceramic material, the binder phase of which essentially consisting of an inorganic cement phase, which ceramic material is in situ-formed on a substrate or in a cavity, **characterised in** that said material also comprises an situ-formed polymer selected from the group that consists of polymers based on hydrophilic or partially hydrophilic acrylate, carbonate, protein, cellulose, siloxane, polyacetal, collagen, elastin, polyester.

44. (new) A ceramic material according to claim 43, **characterised in** that its binder phase is a calcium-containing ceramic powder in the group that consists of aluminates, silicates, phosphates, sulphates and combinations thereof.

45. (new) A ceramic material according to claim 43, **characterised in** that its binder phase has cations selected from the group consisting of Ca, Sr and Ba.

46. (new) A ceramic material according to claim 43, **characterised in** that the inorganic cement phase constitutes 50 % by volume or more of the ceramic material.

47. (new) A ceramic material according to claim 43, **characterised in** that the organic phase exists as a phase

that is non-communicating with the inorganic cement phase, such as separate areas.

48. (new) A ceramic material according to claim 43, **characterised in** that the organic phase exists as a network or as separate areas in the inorganic cement phase.

49. (new) A method of producing a ceramic material according to claim 43 which comprises an organic phase in the form of a polymer, **characterised by** the steps of:

-adding a second part component, being a monomer selected from the group consisting of monomers of hydrophilic methacrylate type, HEMA, monomers having phosphate groups, alkenoids, monomers for carbopolymers, diols, diacids, amino acids, to a powdered material, comprising a first part component selected from the same group of monomers, and

-if necessary, initiating a polymerisation reaction between the first and second part components, whereby the first and second part components together form an organic phase, in the form of a polymer.

50. (new) A method of producing a ceramic material according to claim 49, **characterised in** that the second part component is included in a hydration liquid, or added separately.

51. (new) A method of producing a ceramic material according to claim 49, **characterised in** that the polymer is formed by co-polymerisation *in situ*.

52. (new) A method of producing a ceramic material according to claim 49, **characterised in** that the polymer is formed by condensation polymerisation *in situ*.

53. (new) A method according to claim 49, **characterised in** that the polymerisation reaction is initiated when the first and second components are brought in contact.

54. (new) A method according to claim 49, **characterised in** that the polymerisation reaction is photo- or thermochemically initiated.

55. (new) A method according to claim 49, **characterised in** the hydration and polymerisation reactions not being allowed to give a temperature exceeding 50 °C, in the material, which temperature control is effected by bringing the organic phase to form a network or separate areas in the inorganic cement phase and/or allowing the organic phase to constitute no more than 50 % by volume of the material.

56. (new) A method according to claim 49, **characterised in** that said powdered material initially is compacted to a degree of compaction above 55 %, where after it is finely divided into granules of powder particles, which granules exhibit a mean size of 30 - 250 µm.

57. (new) A method according to claim 56, **characterised in** that said granules are mixed with up to 50 % of non pre-compacted powdered material of the same cement-based system as the powdered material in the granules.

58. (new) A method according to claim 56, **characterised in** that the material is compacted to a raw compact that exhibits an average degree of compaction above 55 %.

59. (new) A method according to claim 57, **characterised in** that the material is suspended in a liquid that reacts with

the binder phase, where after the resulting suspension/paste is drained and compacted before the material is allowed to harden by reaction between the binder phase and any liquid remaining, which compaction is done to a degree of compaction above 55 %.

60. (new) A method according to claim 57, **characterised in** that a hydration liquid is mixed with the granules by rolling, kneading or hand pressing such that a paste is formed, which paste is applied in a designated void.

61. (new) A method according to claim 60, **characterised in** that the paste is applied by packing or squirting into the void.

62. (new) A kit or system for producing a chemically bonded ceramic material, **characterised in** that it comprises a powdered material according to claim 33 and a hydration liquid a second part component which has the ability, together with a first part component comprised in said powdered material, to form an organic phase in the form of a polymer, and optionally an initiator for initiating the reaction between the first and second part components.

63. (new) A device (10, 20) for storing and mixing of a powdered material and a hydration liquid, **characterised in** that said device comprises a first chamber (1) that holds a powdered material according to claim 33, and a second chamber (2) that holds a hydration liquid a second part component which has the ability, together with a first part component comprised in said powdered material, to form an organic phase in the form of a polymer, and an openable seal (3, 6) between the chambers (1, 2).

64. (new) A device according to claim 63, **characterised in** that there is a greater pressure in the second chamber (2) than in the first chamber (1).

65. (new) A device according to any claim 63, **characterised in** that at least the first chamber (1) has walls (4) of a wall material that is flexible enough for allowing processing of the powdered material through the walls (4).

66. (new) A device according to claim 63, **characterised in** that the second chamber (2) is arranged inside the first chamber (1) comprises a ball (7), which second chamber and ball are formed such that, upon shaking of the device, the ball has the ability to break the walls of the second chamber and bring the first and second chamber into contact.